Revision Transmittal Sheet

This page transmits Revision 2 to Service Bulletin No. 75-57-01, “Wing Spar Inspection.”

Rework:

No rework is required for aircraft which have complied with previous issues of this document.

Summary:

Updated Effectivity.

NOTE: Change bars are placed in the left margin of pages where significant changes are located. This revision incorporates the latest document format for Learjet service instructions. The general arrangement of this document may change from the previous issue.

Description of Changes

In the Planning Information section:

Changed the aircraft effectivity from 45-368, 45-446, and 45-456 thru 45-589 to 45-368, 45-446, and 45-456 thru 45-596.

Filing Instructions:

This is a COMPLETE revision. Remove and discard all pages of the prior issue and replace them with pages of Revision 2.

Record of Revisions:

ISSUE	DISTRIBUTION DATE
Basic	Feb 25/19
Revision 1	Oct 26/20
Revision 2	Apr 19/21

Service Bulletin

If the instructions in this publication cannot be completed because of an STC change to the aircraft, speak to the STC holder or the regional Federal Aviation Administration (FAA) office for information and disposition.

Contact Information	Distribution Date	Rev. No.
Business Aircraft Learjet Inc. MS 53 P.O. Box 7707 Wichita, Kansas 67277-7707 Customer Response Center (CRC) yul.parts@aero.bombardier.com 1-866-538-1247 (Toll Free) 1-514-855-2999 (Tel)	April 19, 2021	2

WINGS - WING SPAR INSPECTION

1. Planning Information

A. Effectivity
(1) Learjet 45-368, 45-446, and 45-456 thru 45-596.

B. Reason
(1) Corrosion has been observed on the lower wing splice plates that require a more frequent interval to detect and correct any protective coatings.

C. Description
(1) This service bulletin provides instructions to perform an inspection of the center wing area from front spar to rear spar between wing stations 33.00L to 33.00R and all accompanying structure.

D. Compliance
(1) Recommended - The time compliance for this inspection is for aircraft that are eight years from Certificate of Airworthiness. Aircraft with greater than eight years from Certificate of Airworthiness have 12 months from February 25, 2019 to comply.

E. Approval
(1) The Federal Aviation Administration (FAA) has approved the technical content in this publication that has an effect on the airplane type design.
(2) The European Aviation Safety Agency (EASA) has accepted the technical content in this publication that has an effect on the airplane type design.
(3) Transport Canada Civil Aviation (TCCA) has accepted the technical content in this publication that has an effect on the airplane type design.

F. Labor Hours - Estimated Accomplishment Time

LABOR HOURS	TASK
3.0	Labor hours to gain access.
1.0	Labor hours to do the aircraft modification.
3.4	Labor hours to return the aircraft to airworthy status.
7.4	Total Labor Hours

NOTE: The labor hours provided are estimates to assist scheduling and planning the tasks given in this bulletin. The estimates are for direct labor performed by an experienced crew and do not include the time for familiarization, planning, aircraft preparation in hangar, such as towing and positioning of scaffolds, removal of aircraft loose equipment, acquisition of tools and equipment, training, supervision and inspection.

If labor coverage is provided, only the hours above will be paid.

When planning to complete these instructions, please contact Bombardier Aerospace, Learjet Inc. Business Aircraft Customer Service, Parts Services for parts availability and shipping times as necessary. (Refer to the title page of this document for contact information.)

G. Expense Coverage
(1) None.
(2) Labor Coverage - None.
(3) Material Coverage - None.
(4) Smart Parts Plus Coverage
(a) None.

H. Material Required
(1) There are no kits associated with these instructions.
(2) Other materials/parts necessary to complete these instructions.

PART NUMBER	NOMENCLATURE	QTY	SUPPLIER
240 Grit (or finer) Aluminum Oxide	Abrasive Paper	As Required	Commercially Available
400 Grit Aluminum Oxide	Abrasive Paper	As Required	Commercially Available
Methyl Propyl Ketone (MPK)	Cleaning Solvent	As Required	Commercially Available

NOTE: You can use equivalent alternatives for these items.

For current prices, availability, ordering and shipping information, please call Bombardier Aerospace, Learjet Inc. Business Aircraft Customer Service, Parts Services. (Refer to the title page of this document for contact information.)

I. Tools, Equipment and Materials
(1) Refer to Part 4 of the Non-Destructive Inspection Manual, Ultrasonic Inspection - General Information.
(2) Refer to Part 6 of the Non-Destructive Inspection Manual, General Procedure for Inspection of Surface Cracks on Aluminum Alloy Parts.

J. Weight and Balance
(1) Negligible.

K. References

NOTE: If applicable, referenced third party documentation can be accessed from the Customer Portal under this service bulletin number.

(1) Service Bulletin Compliance Response Form.
(2) Service Bulletin Evaluation Sheet.
(3) Learjet Maintenance Manual, Chapters 6 and 24.
(4) Learjet Structural Repair Manual, Chapter 51.
(5) Learjet Non-Destructive Inspection Manual, Part 4 and 6.

2. Material Information

A. Parts Required
(1) There are no kits associated with these instructions. Refer to Paragraph 1.H. for more materials/ parts necessary to complete these instructions.

3. Accomplishment Instructions

A. Gain Access
(1) Set the battery switches to OFF. If necessary, disconnect external electrical power and the main and emergency batteries from the aircraft. (Refer to Chapter 24 of the Maintenance Manual.)
(2) Remove panels 510AC, 510BC, 510BL, and 610BR. (Refer to Chapter 6 of the Maintenance Manual.)
(3) Lower panels 510AL, 610AR, 720BL, and 730BR. (Refer to Chapter 6 of the Maintenance Manual.)

B. Modification of Aircraft
(1) Perform a visual inspection for corrosion or deterioration (cracked, chipped, peeling, or thining) of protective treatments of the center wing area from front spar to rear spar between wing stations 33.00L to 33.00R. (See Figure 1.)
(a) Do an inspection of the forward and aft sides of the front, mid, and rear center wing spars.
(b) Do an inspection of the left and right hand ribs at WS 5.8, WS 16.5, and WS 33.0.
(c) Do an inspection of the front, mid, and rear spar splice plates.
(d) Carefully examine the accompanying fasteners.
(2) Deleted.
(3) If no corrosion is found and the protective treatments are not deteriorated, go to step 3.B.(9).
(4) If no corrosion is found but the protective treatments are deteriorated:
(a) As necessary treat the deteriorated areas in accordance with Chapter 51 of the Structural Repair Manual, Revision 22 or later approved revision.
(b) After the protective treatments have been applied go to step 3.B.(9).
(5) If corrosion is found:

CAUTION: DO NOT REMOVE MORE THAN 50% OF THE FASTENERS AT ONE TIME WITHOUT SHORING THE WING.

(a) As necessary, remove fasteners to get access to the corrosion.
1) Do not remove more than 50% of the fasteners at one time without shoring the wing. Contact the Learjet Customer Response Center for shoring procedures.
(b) Blend the corroded area as follows:
1) Blend the corrosion area with a minimum 10:1 blend ratio. (See Figure 2.)

CAUTION: DO NOT USE STEEL WOOL, STEEL WIRE BRUSHES OR SEVERE ABRASIVES WHEN YOU REWORK THE STRUCTURE FOR CORROSION. USE 240 GRIT OR FINER ALUMINUM OXIDE ABRASIVE PAPER. FINISH WITH 400 GRIT PAPER.

2) Get the necessary tools and equipment.
3) Clean the corroded area so that all loose corrosion and debris is removed from the rework areas.
4) Use 240 grit and then progressively finer grit aluminum oxide abrasive paper to sand and blend the corroded areas to get the specified surface finish. (See Figure 2.)

WARNING: SPECIAL PRECAUTIONS MUST BE OBSERVED DURING CLEANING. CLEANING SOLVENTS ARE TOXIC AND FLAMMABLE. YOU MUST WEAR PROTECTIVE MASK AND SUPPLY SUFFICIENT VENTILATION WHEN YOU USE THE CLEANING SOLVENTS.

YOU MUST FOLLOW THE MANUFACTURER'S PUBLISHED INSTRUCTIONS WHEN YOU USE CLEANING SOLVENTS.

5) With a clean cloth soaked with cleaning solvent (MPK), clean the sanded surface.
   a) Immediately wipe the area dry with a clean, dry cloth.
   b) Do not let the cleaning solvent be "wicked" under the adjacent structure.
6) Make sure to keep a RMS 63 finish or better.

(c) Do an eddy current inspection of the blended areas as follows:

NOTE: This inspection is to make sure the corrosion is removed.

1) Complete the eddy current inspections in accordance with Learjet NDI-104 manual, Part 6, Eddy Current Inspection (General) and Part 6, 51-00-01, General Procedure for Inspection of Surface Cracks on Aluminum Alloy Parts, Revision 23 or later approved revision.
2) All NDI analysis must be done by an NAS 410 or ANST equivalent minimum level II inspector qualified to the specific methodology.

(d) If corrosion is found during the eddy current inspection:
1) Do the blending procedures again in accordance with step (b) above.
2) Do the eddy current inspection again on the new blended areas in accordance with step (c) above.

(6) Do the ultrasonic thickness measurements as follows:

(a) Lay out the 0.5 by 0.5 inch grids for the ultrasonic thickness measurements over the blended areas that extend to undamaged material. (See Figure 1, Details B, C, D and associated views for typical examples.)

NOTE: The spar flange tapers in both the inboard/outboard and forward/aft directions. Document the position of the grid for the ultrasonic thickness measurements with two dimensions to key spar features. Complete the ultrasonic measurements square to the X axis. [The X axis is the monument lines (webs, corners, etc.) that are parallel to the aircraft centerline.]

(b) Do the ultrasonic thickness measurements within each grid area in accordance with Learjet NDI-104 manual, Part 4, Ultrasonic Inspection, and ASTM standards, ASTM E797/E797M Standard Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method, as follows:
1) All NDI analysis must be done by an NAS 410 or ANST equivalent minimum level II inspector qualified to the specific methodology.
2) To capture the taper thickness, make sure to measure at least two locations within the blended area.
3) Make sure the measurements are taken where the most material was removed.
4) Extend the ultrasonic measurements two grid points past the blended area minimum.

(c) Give the results of the ultrasonic measurements, with digital photos of all blended areas, to the Learjet Customer Response Center for analysis by Customer Support Engineering of the blended area remaining material thickness.

(d) Do not proceed until approval has been received from Learjet Customer Support Engineering for all corrosion repairs.

(7) After engineering approval of the corrosion repair, apply the protective treatment to all repaired and deteriorated areas in accordance with Chapter 51 of the Structural Repair Manual, Revision 22 or later approved revision.
(8) Replace all removed hardware with new hardware in accordance with Chapter 51 of the Structural Repair Manual, Revision 22 or later approved revision.

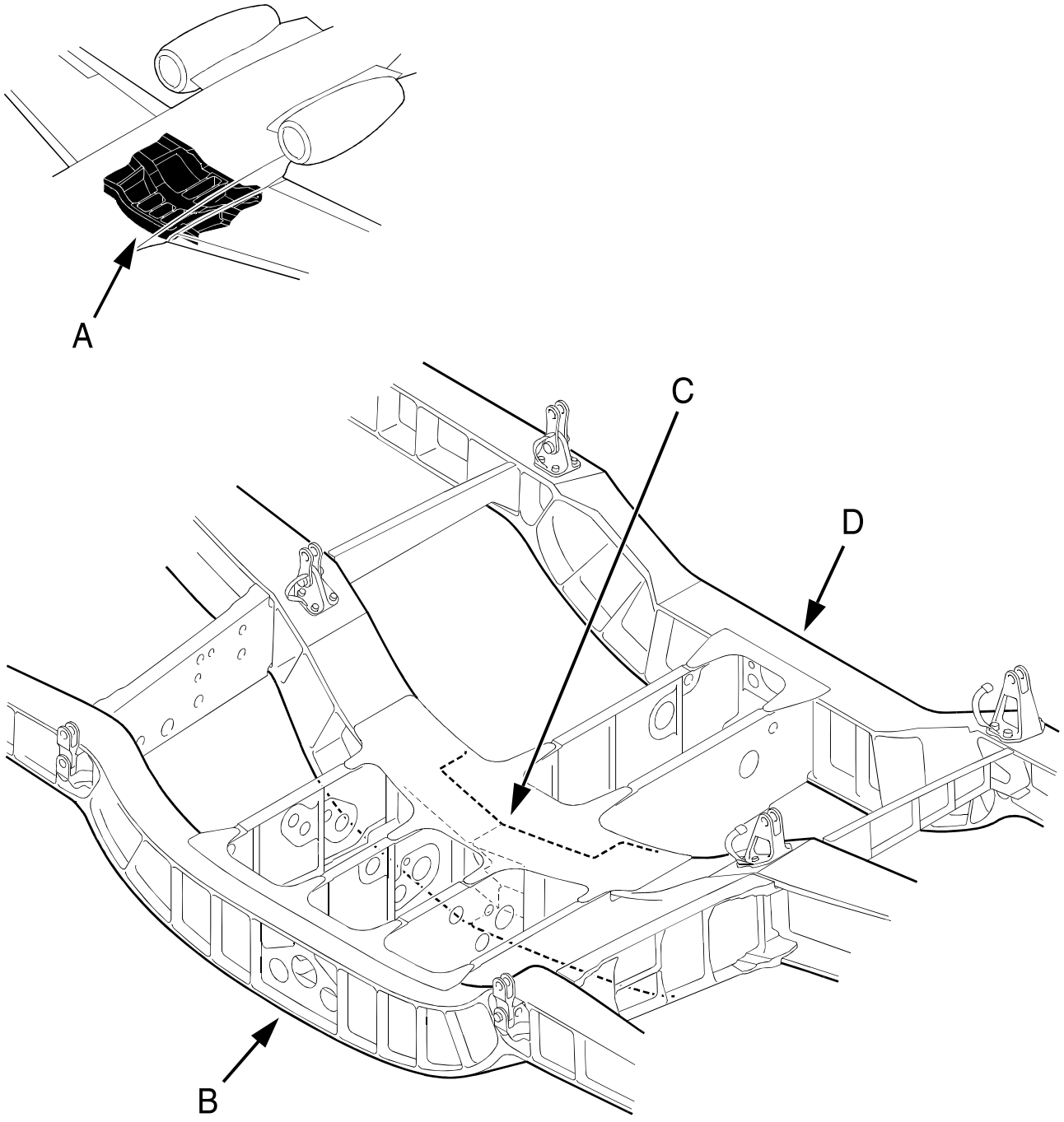
NOTE: You can procure all new hardware locally or contact Learjet Spare Parts Sales.

(a) If necessary, remove the wing shoring.
(9) Install equipment removed for inspection or repair.
(10) Install panels 510AC, 510BC, 510BL, and 610BR. (Refer to Chapter 6 of the Maintenance Manual.)
(11) Close panels 510AL, 610AR, 720BL, and 730BR. (Refer to Chapter 6 of the Maintenance Manual.)

C. Return Aircraft to Airworthy Status
(1) Connect the main and emergency batteries to the aircraft. (Refer to Chapter 24 of the Maintenance Manual.)
(2) Install any additional items removed for access.

D. Compliance Response Form
(1) Complete the compliance response form.
(2) Send the compliance response form to Learjet Inc. as soon as possible.

E. Aircraft Maintenance Records
(1) Complete the Aircraft Maintenance Records in accordance with the regulatory requirements of the appropriate aircraft certification authority.

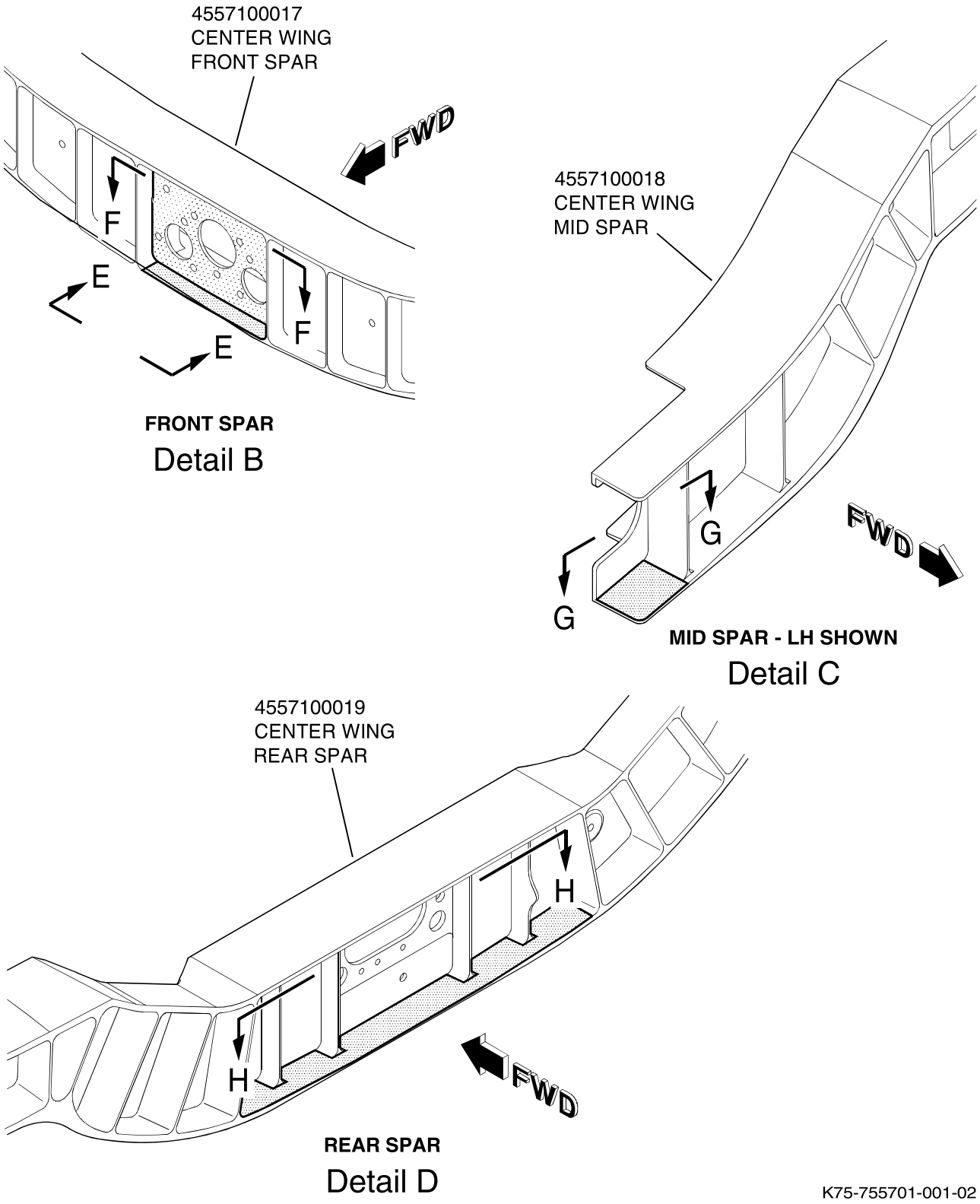


CENTER WING STRUCTURE
SKIN AND ASSOCIATED EQUIPMENT NOT SHOWN FOR CLARITY

Detail A

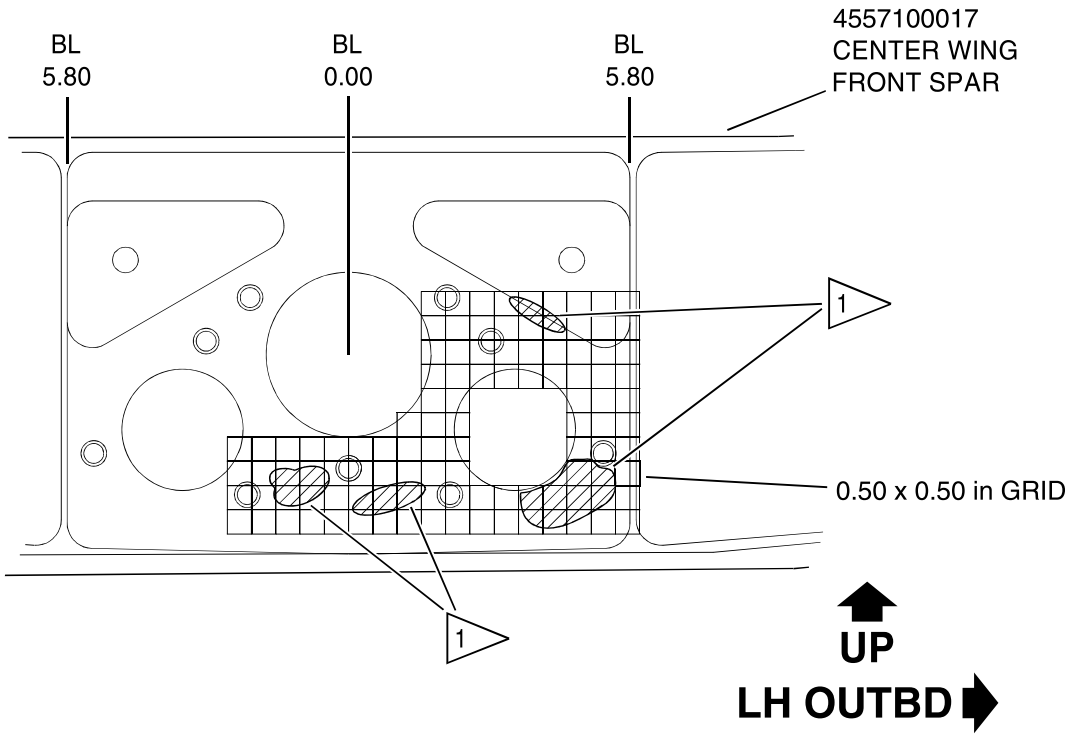
K75-755701-001-01

Wing Spar Inspection
Figure 1 (Sheet 1 of 4)



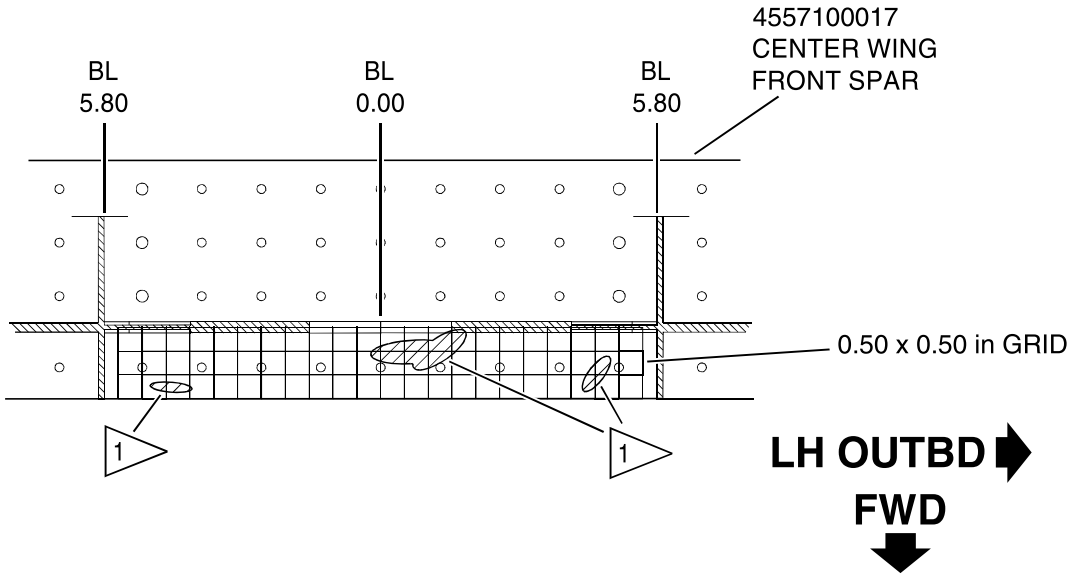
K75-755701-001-02

Wing Spar Inspection
Figure 1 (Sheet 2 of 4)



FRONT SPAR GRID
VEW LOOKING AFT

View E-E



FRONT SPAR GRID
VEW LOOKING DOWN ON LOWER FLANGE

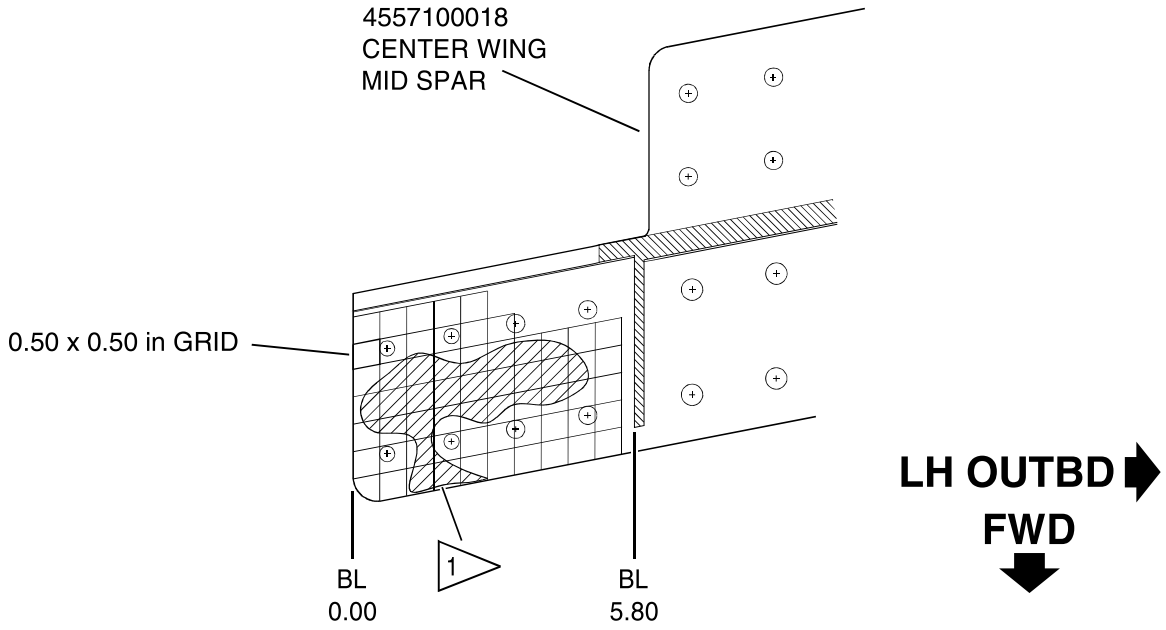
View F-F

NOTE

1 Typical blended areas.

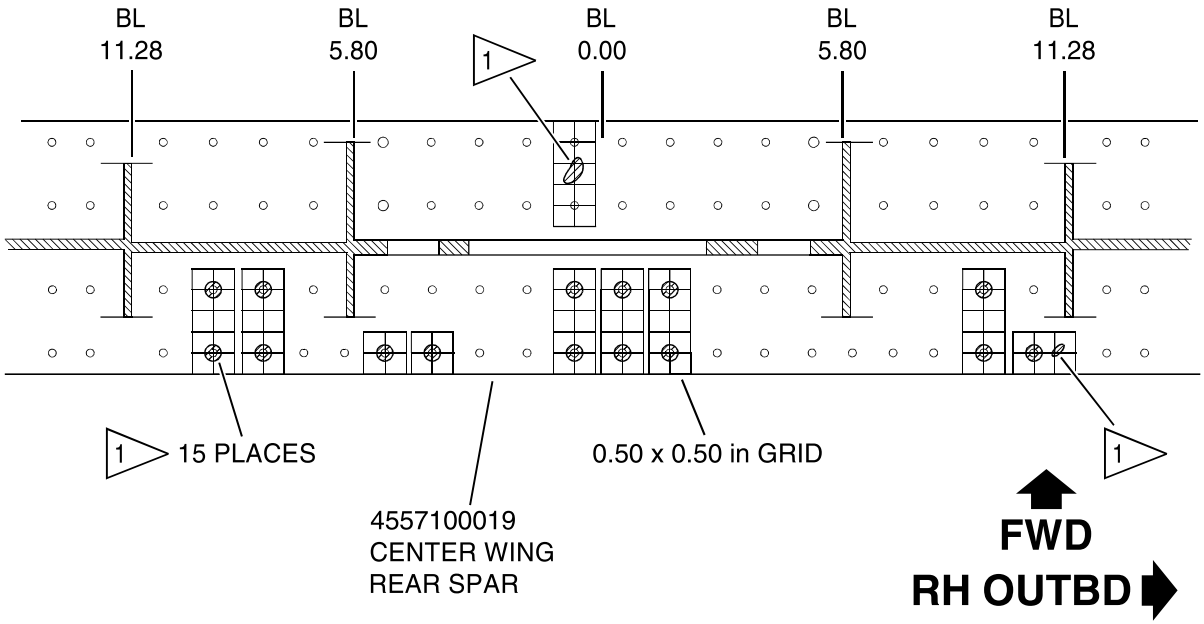
K75-755701-001-03

Wing Spar Inspection
Figure 1 (Sheet 3 of 4)



MID SPAR GRID - LH SHOWN
VEW LOOKING DOWN ON LOWER FLANGE

View G-G



REAR SPAR GRID
VEW LOOKING DOWN ON LOWER FLANGE

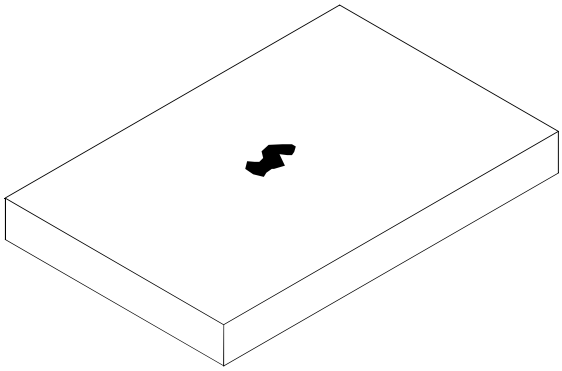
View H-H

NOTE

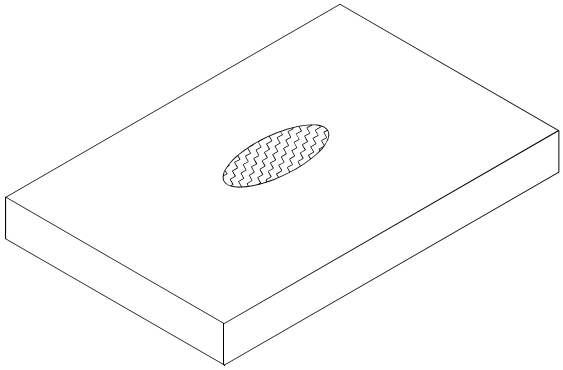
1 Typical blended areas.

K75-755701-001-04

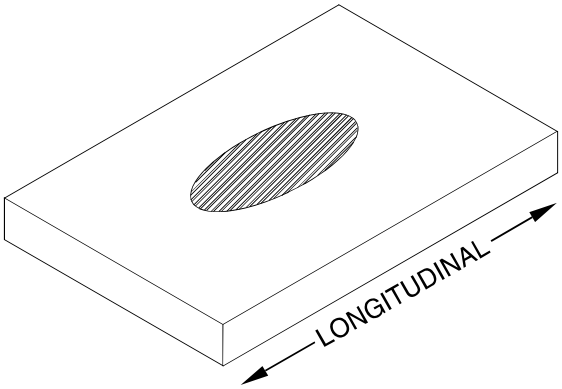
Wing Spar Inspection
Figure 1 (Sheet 4 of 4)



CORROSION DAMAGE BEFORE REWORK



DEPRESSION AFTER CORROSION REMOVAL (ROUGH EDGES HAVE BEEN SMOOTHED AND ALL CORROSION HAS BEEN REMOVED)



DISH-OUT AFTER BLENDING (BLENDING HAS BEEN ACCOMPLISHED IN THE RATIO SPECIFIED AND DIRECTION SHOWN)

K75-755701-002-01

Corrosion Blending
Figure 2 (Sheet 1 of 1)

SERVICE BULLETIN COMPLIANCE RESPONSE

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It is necessary that Bombardier Learjet record aircraft having complied with this Service Bulletin. Please fill in the Service Bulletin and aircraft information below, sign and date the form in the space provided, fold on dotted lines, seal with tape, and mail completed form to Bombardier Learjet Maintenance Engineering. If mailed within the United States, this form may be mailed to Bombardier Learjet Maintenance Engineering using business reply mail (see reverse). This form may be faxed or emailed if preferred. (See mailing information provided.)

WARRANTY - Completion of this response form is required in order to process the warranty claim. Therefore, if a warranty allowance is provided in the Service Bulletin, return a copy of this form with the warranty claim.

SMART PARTS - Completion of this response form is required in order to remain, enroll, or re-enroll in the Smart Parts Program.

CLICK HERE TO EMAIL

*An email will be opened addressed to Fracas and this form will be attached.

Mailing Information:

Bombardier Learjet

Maintenance Engineering

(MS #78) (FAX 316 946-2305)

fracas_usa@aero.bombardier.com

Customer Support

Learjet, Inc.

Service Bulletin Information

SB Title: Wing Spar Inspection

Service Bulletin No. 75-57-01 Rev No. 2 Date April 19, 2021

Aircraft Information

Model _____ Serial No. _____ Flight Hours _____ Landings _____

Service Facility Information

Facility Incorporating Bulletin _____

Compliance Information

The above referenced Service Bulletin was complied with on the referenced serial number aircraft at the listed aircraft flight hours/landings:

Actual hours to accomplish Service Bulletin: Access _____ Modify _____ Test(s) _____ Restore _____

Name: (Please Print) _____ Date _____

Email: _____

Comments

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SERVICE BULLETIN EVALUATION SHEET

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*An email will be opened addressed to the SB Group and this form will be attached.

YOUR COMMENTS WILL HELP US IMPROVE OUR SERVICE BULLETINS

SERVICE BULLETIN: 75-57-01 **REVISION:** 2 **DATED:** April 19, 2021

TITLE: Wing Spar Inspection

	POOR	FAIR	GOOD	VERY GOOD	EXCELLENT
HOW EASY IS THE BULLETIN TO UNDERSTAND? COMMENTS	☐	☐	☐	☐	☐
DOES THE BULLETIN TELL YOU ALL YOU NEED TO KNOW ABOUT THE JOB? COMMENTS	☐	☐	☐	☐	☐
DO YOU THINK THE BULLETIN CONVEYS THE BEST WAY TO DO THE JOB? COMMENTS	☐	☐	☐	☐	☐
HOW REALISTIC ARE THE LABOR-HOUR ESTIMATES? COMMENTS	☐	☐	☐	☐	☐
WHAT IS YOUR APPRECIATION OF THE ILLUSTRATION(S)? COMMENTS	☐	☐	☐	☐	☐

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